

REMARKS/ARGUMENTS

The present amendment is submitted in response to the Office Action dated June 4, 2003, which set a three-month period for response, making this amendment due by September 4, 2003.

Claims 7-13 are pending in this application.

In the Office Action, the Applicants' Preliminary Amendment filed 9/25/01 and IDS statement, submitted on 4/29/02, were acknowledged. Claims 7, 9, and 11-13 were rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,790,743 to Leikert et al. Claims 8 and 10 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Leikert et al as applied to claims 7 and 9 and further in view of U.S. Patent No. 5,411,394 to Beer et al.

The Applicants respectfully disagree that the Leikert reference anticipates or makes obvious the present invention as defined in claims 7-13, whether viewed alone or in combination with the Beer et al reference.

However, to more clearly define independent claim 7 over these references, claim 7 has been amended in line 4 to add the words "from fuel and primary air" in order to clarify how the sub-stoichiometric primary zone in the form of a flame core is produced.

The primary reference to Leikert discloses a method for burning a nitrogen-containing fuel, while reducing the emission of nitrogen oxides. Leikert's method includes the steps of producing a sub-stoichiometric primary zone in the form of a flame core. However, Leikert fails to disclose a step of supplying the flame core with a nitrogen oxide reducing agent, as defined in claim 7 of the present application.

Furthermore, Leikert does not disclose that the reducing agent is a nitrogen compound or a hydrocarbon, also set forth in claim 7.

Leikert teaches using a reduction fuel, that is, a fuel that is used as a reducing agent. In contrast, the method of the present invention does not use a fuel as a reducing agent. This is clear regarding the nitrogen compound.

However, the hydrocarbon, when used according to the method of the present invention, also is not used as a fuel, that is, it is not burned or oxidized. Rather, as disclosed in the present application, the hydrocarbon is used as a source for CH₃ radicals that are used to reduce nitrogen oxide.

In addition, Leikert teaches feeding the reduction fuel into a secondary flame zone in the region of the primary flame zone; the primary flame zone is generated by supplying a primary fuel (coal dust) and combustion air to the burner (Leikert, column 2, lines 19-26 and column 3, lines 31-35). Thus, Leikert can be included with the prior art discussed in the present application on page 3, lines 4-8.

According to the prior art references distinguished in the present application, a reducing agent is introduced into a separate reduction zone that is situated between the burner zone and the burn-out zone. The primary flame zone (Fig. 1 of Leikert) corresponds to the primary fuel or flame core as defined in claim 7 of the present invention. According to Leikert, the reduction fuel is not injected into the primary flame zone 7. Rather, the reduction fuel is injected around the primary flame zone 7 to form a secondary flame zone around the primary flame zone.

In contrast, in the present invention, the reducing agent is introduced into the primary zone, that is, the flame core.

The secondary reference to Beer, cited in combination with Leikert in support of the rejection of claims 8 and 10 under Section 103, does not disclose supplying a reducing agent to the flame core. Again, then, because claims 8 and 10 depend from claim 7, the combination of Leikert and Beer cannot render obvious the subject matter of claims 8 and 10.

For the reasons set forth above, the Applicants respectfully submit that claims 7-13 are patentable over the cited references. The Applicants further request withdrawal of the rejections under 35 U.S.C. 102 and 103 and reconsideration of the claims as herein amended.

In light of the foregoing amendment and argument in support of patentability, the Applicants respectfully submit that this application now stands in condition for allowance. Action to this end is courteously solicited. However, should the Examiner have any further comments or suggestions, the undersigned would very much welcome a telephone call in order to discuss appropriate claim language that will place the application into condition for allowance.

Respectfully Submitted,

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